

REMARKS

General

Inventor Richard Scheps is referred to herein as "Applicant".

U.S. Patent 5,740,190 issued on April 14, 1998 to Peter Moulton is referred to herein as "Moulton".

U.S. Patent 5,894,489 issued on April 13, 1999 to Thorsteinn Halldorsson, et al. is referred to herein as "Halldorsson".

FIG. 1 of U.S. Patent Application No. 09/929,301 by Applicant is referred to herein as "FIG. 1-PRIOR ART".

Status of the Claims

Claims 1-68 are rejected by the examiner.

By this amendment:

Claims 2,3,5,14,15,16,24,25,27,36,37,39,48,49,50,58,59, and 61 have been cancelled.

Claim 1 has been amended to include the limitations of cancelled claims 2, 3, and 5.

Claim 13 has been amended to include the limitations of cancelled claims 14, 15, and 16.

Claim 21 has been amended to include the limitations of cancelled claims 24, 25, and 27.

Claim 35 has been amended to include the limitations of cancelled claims 36, 37, and 39.

Claim 47 has been amended to include the limitations of cancelled claims 48, 49, and 50.

Claim 55 has been amended to include the limitations of cancelled claims 58, 59, and 61.

Claims 4,6,17,26,28,38,40,51,60, and 62 have been amended to correct their dependency structure.

Response to rejection of Claims 1-68 under 35 U.S.C. §103(a) as unpatentable over Halldorsson in view of FIG. 1-PRIOR ART and further in view of Moulton.

The rejection with regards to the cancelled claims is now moot in light of this amendment. Applicant respectfully traverses the rejection of the remaining claims 1,4,6-13,17-23,26,28-35,38,40-47,51-57,60, and 62-68 for the following reasons.

The basic requirements of a *prima facie* case of obviousness are set forth in MPEP §2143, which states:

“First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

MPEP §2142 further states, in part, *“The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness.”* The rejection fails to establish a *prima facie* case of obviousness because (1) there has been **no** objective evidence (factual support) provided that would suggest or motivate the combination of the cited references; (2) there can be no reasonable expectation of success of the combination of references because Halldorsson is not combinable with FIG. 1-PRIOR ART, which is also, not combinable with Moulton; and (3) the combination of cited references fails to teach each and every element claimed by Applicant. All of the claims are patentable over Halldorsson in view of FIG. 1-PRIOR ART and in further view of Moulton, as is more fully explained below.

1. The Examiner has stated in the Detailed Action, mailed February 23, 2004, *“It is within one skill [SIC] in the art to provide Halldorsson '489 the upconversion element as taught by the PRIOR ART to convert wavelength for the benefit of converting laser output frequency,”* but the Examiner has provided no further basis for this rejection. There is NO suggestion in

either FIG. 1-PRIOR ART or in Halldorsson to combine the laser of FIG. 1-PRIOR ART and the solid-state laser system of Halldorsson. Therefore, the rejection lacks any objective evidence in its support and appears to be based on 20-20 hindsight reconstruction of the references based on Applicant's own teachings. If the rejection is based on information within the personal knowledge of the Examiner, then **Applicants request the Examiner provide all facts, within the personal knowledge of the Examiner that are used to support the rejection, in an affidavit pursuant with MPEP §2144.04**, which states in part:

"When a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner."

In addition, the Examiner cites In re Karlson, 136 USPQ 184 and a statement that, "...it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art." Application of this holding to the present prosecution is inappropriate and misguided for at least two reasons. First, by the attempted combination of Halldorsson and FIG. 1-PRIOR ART, there is no mere omission of elements. Instead, the examiner is attempting to substitute elements (SHG and OPO with laser gain element). Substitution is substantially different than the mere omission of elements. Second, part of the rationale of In re Karlson was that omission of the screen and filler tubes would not change the function of the remaining elements. Halldorsson is premised on the utilization of SHG and OPO for frequency tuning of an IR laser. Replacement of SHG and OPO with the laser gain element of FIG. 1-PRIOR ART, as suggested by Examiner, would substantially change the outputs of Halldorsson in a way not desired by Halldorsson, much less one desired by Applicant, thereby changing its desired function. There has been no suggestion or teaching by the references, nor the by the Examiner showing how to combine these references

and still maintain the desired RGB output.

2. Not only is there no suggestion to combine the references, the references themselves actually teach away from such a combination because Halldorsson is not combinable with FIG. 1-PRIOR ART. As stated previously, Halldorsson is premised on the utilization of SHG and OPO for frequency tuning of an IR laser. There is no upconversion in Halldorsson (nor is there upconversion in Moulton). Replacement of SHG and OPO with the laser gain element of FIG. 1-PRIOR ART, as suggested by Examiner, would substantially change the outputs of Halldorsson in a way not desired by Halldorsson, much less one desired by Applicant.

3. Lastly, even if there was a suggestion to combine the references, and they were, indeed, combinable, the resulting combination of Halldorsson, Moulton and FIG. 1-PRIOR ART does not teach each and every element claimed by Applicant.

Each of the pending claims, as amended, includes, among other things, a Pr:YALO laser gain element. None of the cited references teaches or suggests the use of a *Praseodymium* (Pr) doped YALO crystal. (Claims 1, 13, 21, 35, 47, 55, and in the spec on page 8, lines 32-33). This rejection is based on an erroneous interpretation by Examiner of Moulton on two accounts: (1) there is no laser gain element used for upconversion in Moulton; and (2) Moulton does not teach or suggest the use of a *Praseodymium* (Pr) doped YALO crystal. Instead, what Moulton discloses on column 6, table 1 is the use of *Neodymium* (Nd) doped YALO crystal for use in the *laser* (FIG 1, numeral 10). Laser 10, of Moulton, is used to generate energy that is used to pump an Optical Parametric Oscillator 22, not for upconversion. Since the cited prior art fails to teach each and every element claimed, Applicant respectfully submits that all pending claims, as amended, are in condition for allowance. Reconsideration of this rejection is requested.

Furthermore, Examiner has stated, on page 3 of the Detailed Action mailed February 23,

2004, that, "...Halldorsson '489 (Fig 1) disclose red/green/blue lights are combined into a single collinear beam and single collinear beam is substantially white, note col.1." Applicant's Agent has carefully read Fig. 1, column 1, and the rest of Halldorsson, but has seen no mention or suggestion that the red/green/blue lights are combined into a single beam, much less one that is substantially white. If Examiner continues to assert this rejection, Applicants, again, request that its basis be explained and the exact location in Halldorsson where the suggestion of combining the red/green/blue lights into a single collinear beam be given in a non-final office action so that Applicant may be given fair opportunity to reply. Absent such a showing, Applicant submits that all pending claims, as amended, are directed to patentable subject matter. Accordingly, Applicant respectfully requests reconsideration of the 35 U.S.C. §103(a) rejection of all pending claims.

Conclusion

Applicant respectfully requests withdrawal of the rejections of claims 1,4,6-13,17-23,26,28-35,38,40-47,51-57,60,62-68, as amended, under 35 USC. §103(a). Accordingly, Applicant respectfully submits that this application is now in condition for allowance. Early allowance of claims 1,4,6-13,17-23,26,28-35,38,40-47,51-57,60,62-68 is solicited.

No Fee is required for this response.

Respectfully submitted,

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